

ABSTRACT OF THE DISCLOSURE

A backflow blocker prevents backflow of gas to a lower pressure first stage of a system for processing particles from a downstream higher pressure second stage of the system. The blocker comprises an upright duct connecting the first stage to the second stage. The duct is at least partly filled with a column of particles passing from the first stage to the second stage. By properly selecting the duct dimensions and by controlling the flow rate of particles into and from the duct, the velocity of downwardly moving particles in the duct can be made to exceed the velocity at which the gasses flow through the particles in the duct. This prevents gasses from flowing from the lower pressure downstream stage to the higher pressure upstream stage.